



ShoreZone



Key Contacts for Team ShoreZone



- **NOAA**

Cindy Hartmann Moore (NOAA Fisheries, Juneau)

Mandy Lindeberg (NOAA Alaska Fisheries Science Center, at Lena Point, Juneau)

Steve Lewis (NOAA Fisheries, Juneau) lead for the NOAA ShoreZone website and database distribution

- **Alaska Department of Natural Resources**

David Gann (Juneau)

- **Cook Inlet Citizens Advisory Council**

Susan Saupe (Anchorage/Kenai)

ShoreZone Alaska Partners

Alaska Department of Environmental
Conservation
Alaska Department of Fish and Game
Alaska Department of Natural
Resources
Alaska Ocean Observatory System
Alyeska Pipeline Service Company
Archipelago Marine Research Ltd.
Coastal and Ocean Resources Inc.
Coastwise Services
Cook Inlet Regional Citizens Advisory
Council
Exxon Valdez Oil Spill Trustee Council
Kachemak Bay National Research
Reserve
Minerals Management Services,
Coastal Impact Assistance Program
National Park Service
NOAA National Marine Fisheries
Service, Alaska Region and Alaska
Fisheries Science Center

North Pacific Research Board
Prince William Sound Regional
Citizens Advisory Council
Prince William Sound Science Center
Royal Caribbean Cruise Lines, Ocean
Fund
The Skaggs Foundation
The Gordon and Betty Moore
Foundation
Sitka Tribe of Alaska
Southeast Alaska Petroleum
Resources Organization
The Nature Conservancy
US Coast Guard
USDA Forest Service
US Fish and Wildlife Service
University of Alaska Fairbanks
University of Alaska Southeast





The ShoreZone Alaska team was the recipient of the

2009 Coastal America Spirit Award

The national award is for ***“action-oriented, results-driven collaboration process dedicated to restoring and preserving coastal ecosystems and addressing critical environmental issues.”***

What is ShoreZone?



ShoreZone is a coastal habitat mapping system that characterizes physical and biological resources of the shoreline.

ShoreZone features:

- georeferenced *imagery*
- georeferenced *data*
- searchable *database*



What is ShoreZone?

Mapped Habitats



wave exposure



geomorphology



sediment texture



intertidal/subtidal biota



supratidal biota







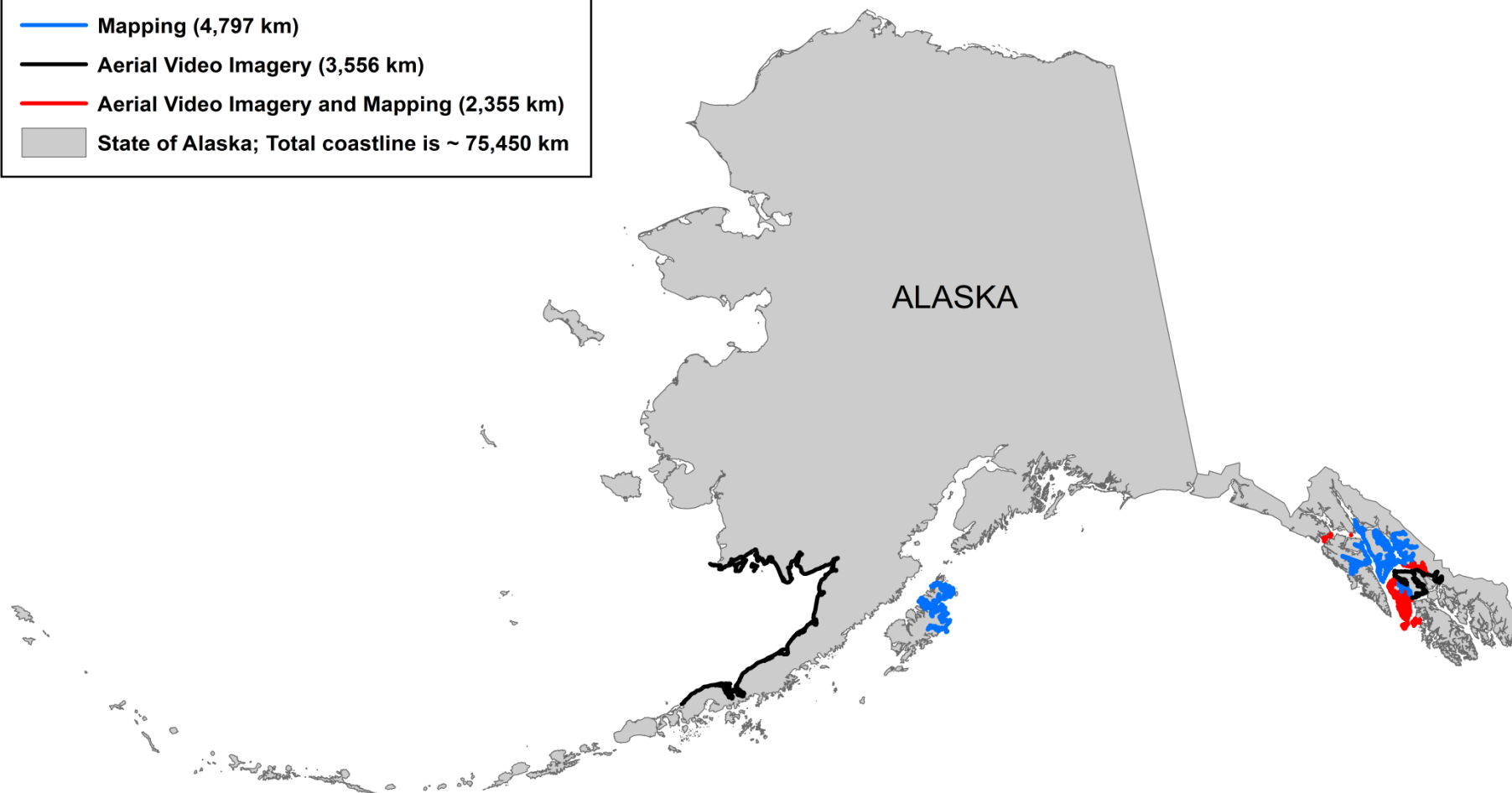
man-made features

ALASKA DEPARTMENT OF NATURAL RESOURCES FUNDING FOR THE SHOREZONE COASTAL HABITAT MAPPING PROGRAM IN ALASKA



DNR ShoreZone Funding

-  Mapping (4,797 km)
-  Aerial Video Imagery (3,556 km)
-  Aerial Video Imagery and Mapping (2,355 km)
-  State of Alaska; Total coastline is ~ 75,450 km







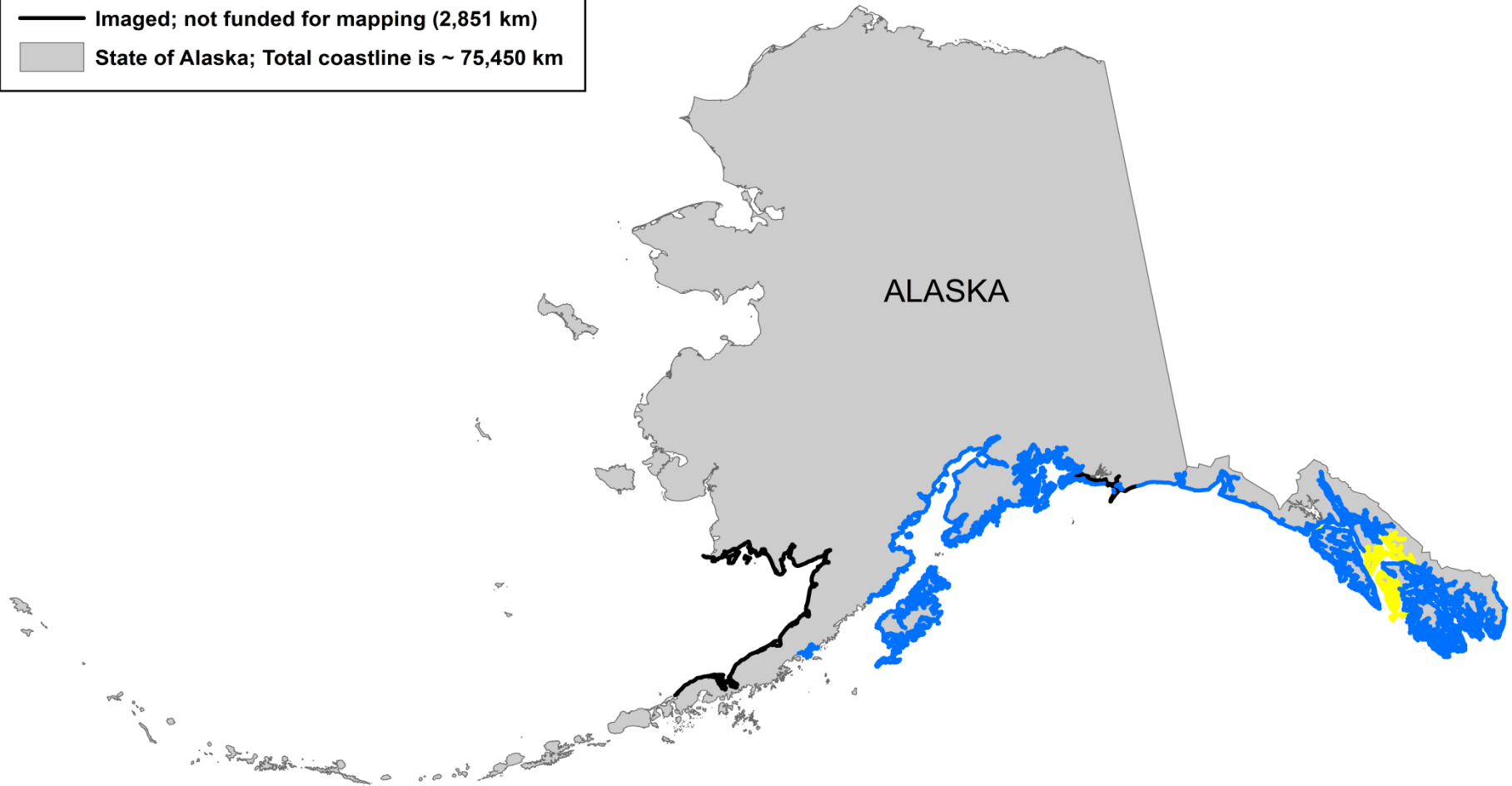
Map Date: April 2011



SHOREZONE COASTAL HABITAT MAPPING PROGRAM IN ALASKA

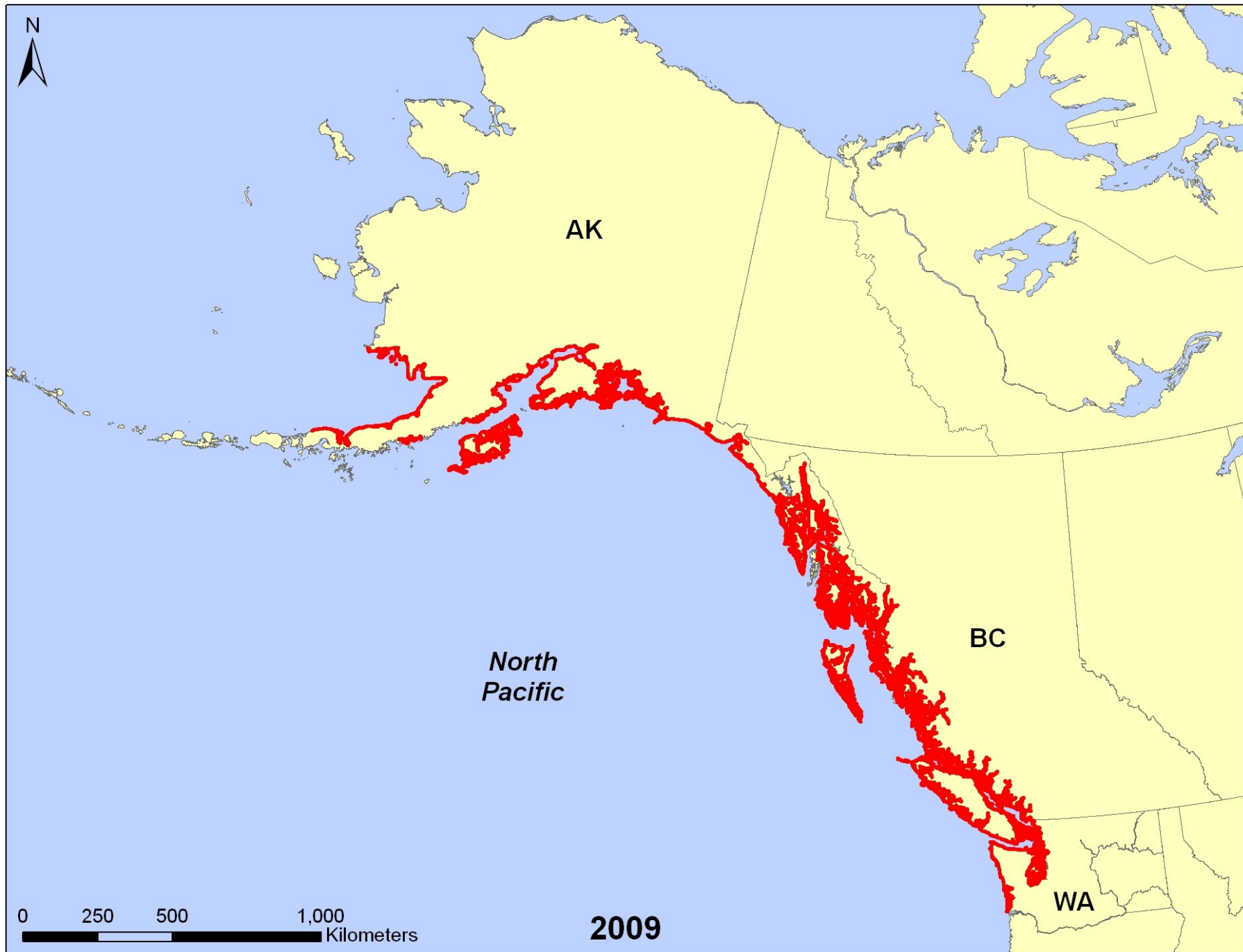


-  Imaged and mapped (40,581 km)
-  Imaged; mapping in progress (4,714 km)
-  Imaged; not funded for mapping (2,851 km)
-  State of Alaska; Total coastline is ~ 75,450 km



Map Date: April 2011

0 125 250 500 750 1,000 km

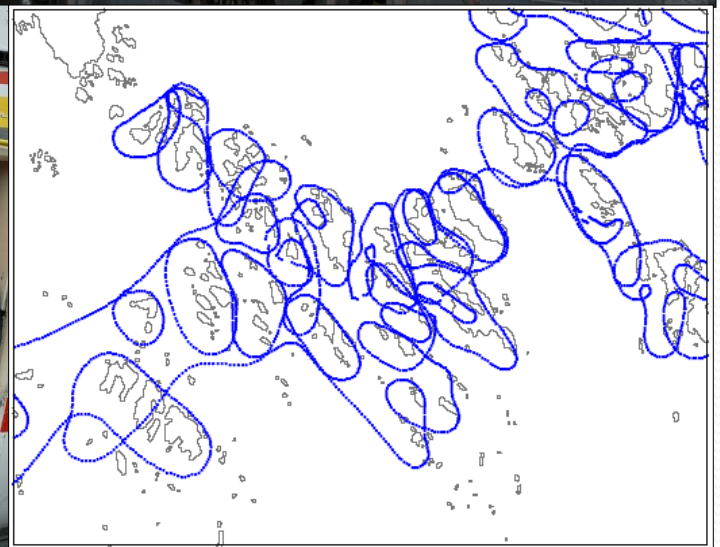


ShoreZone Method: Coastal Imagery



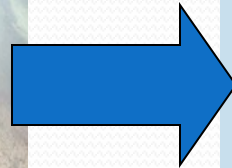
Mapping is based on video and still imagery:

- low-altitude flights of $< 200\text{m}$
- zero tides or lower
- oblique camera view
- spatially-referenced



How is ShoreZone mapped?

from imagery to maps with database



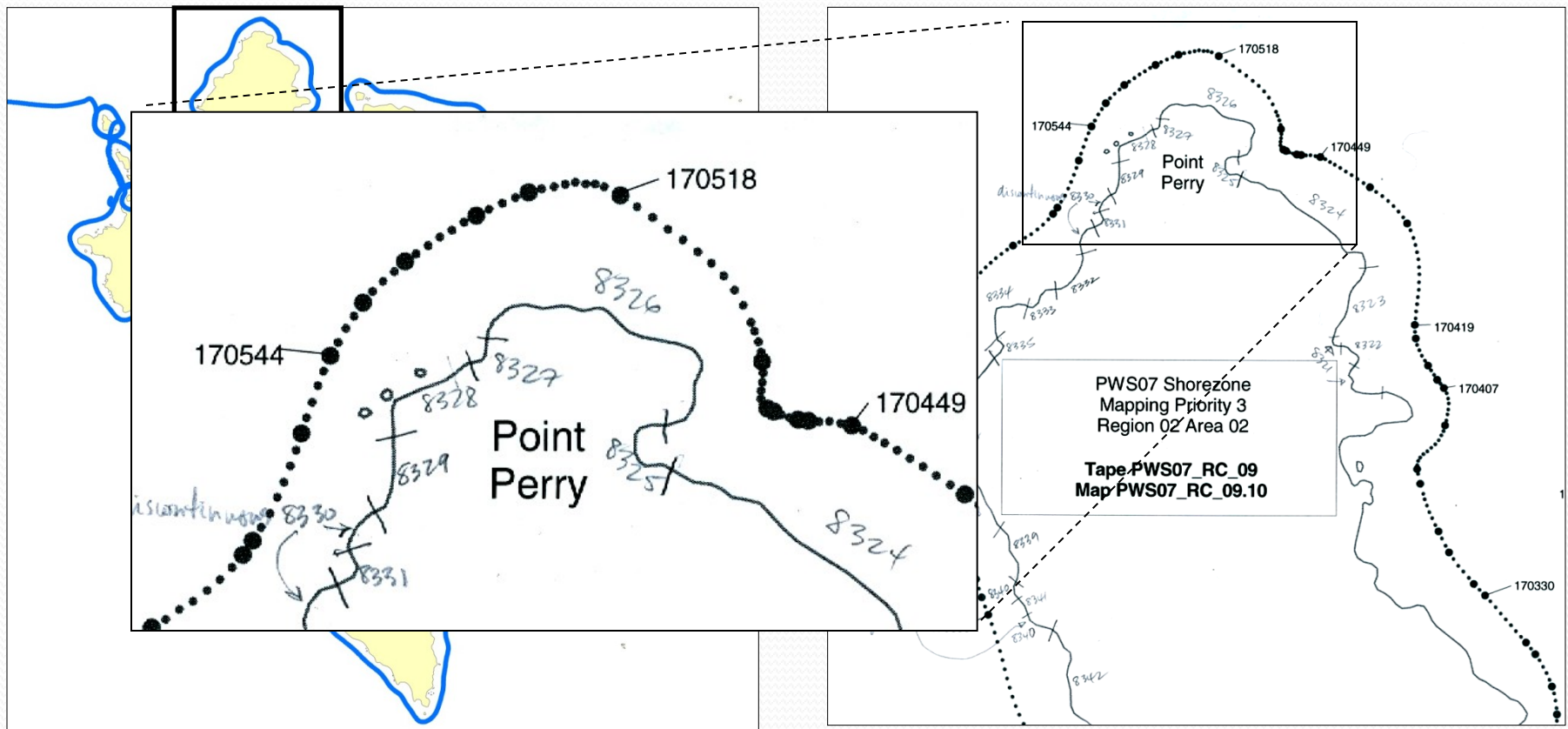
ShoreZone Method: Digital Shoreline



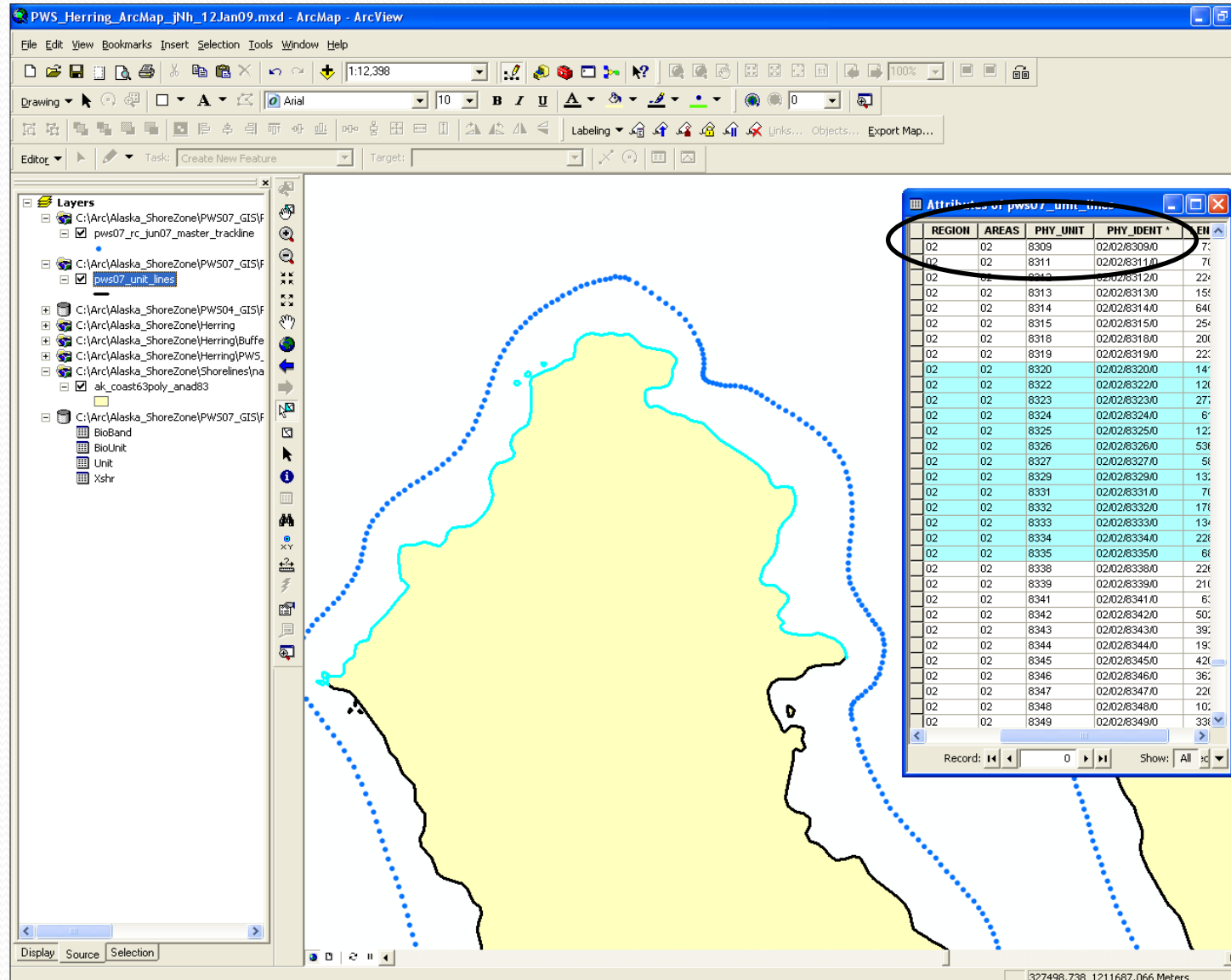
GPS flight trackline recorded at
1-second intervals:

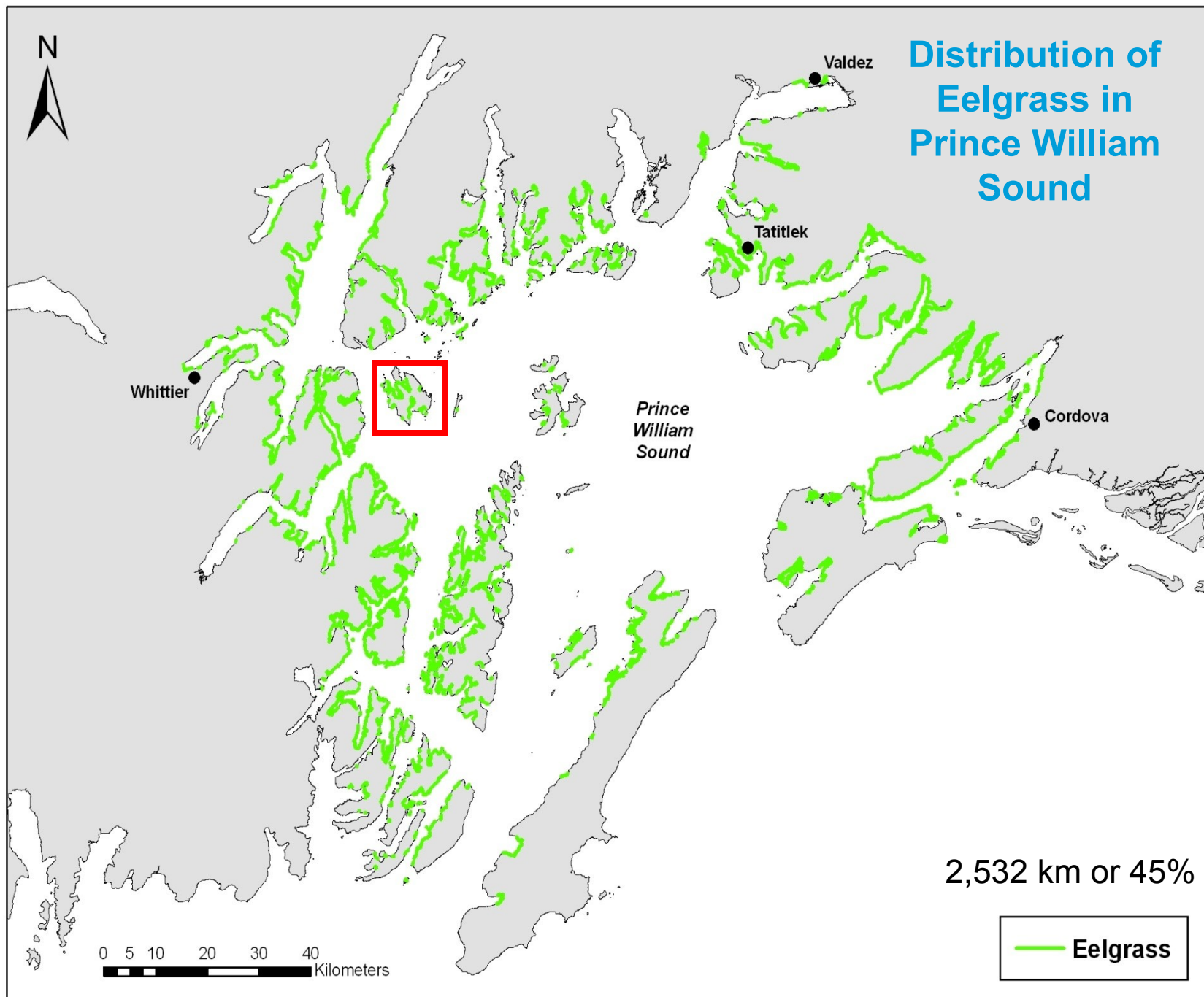


Trackline and imagery are used
to segment digital shoreline
into along-shore units:

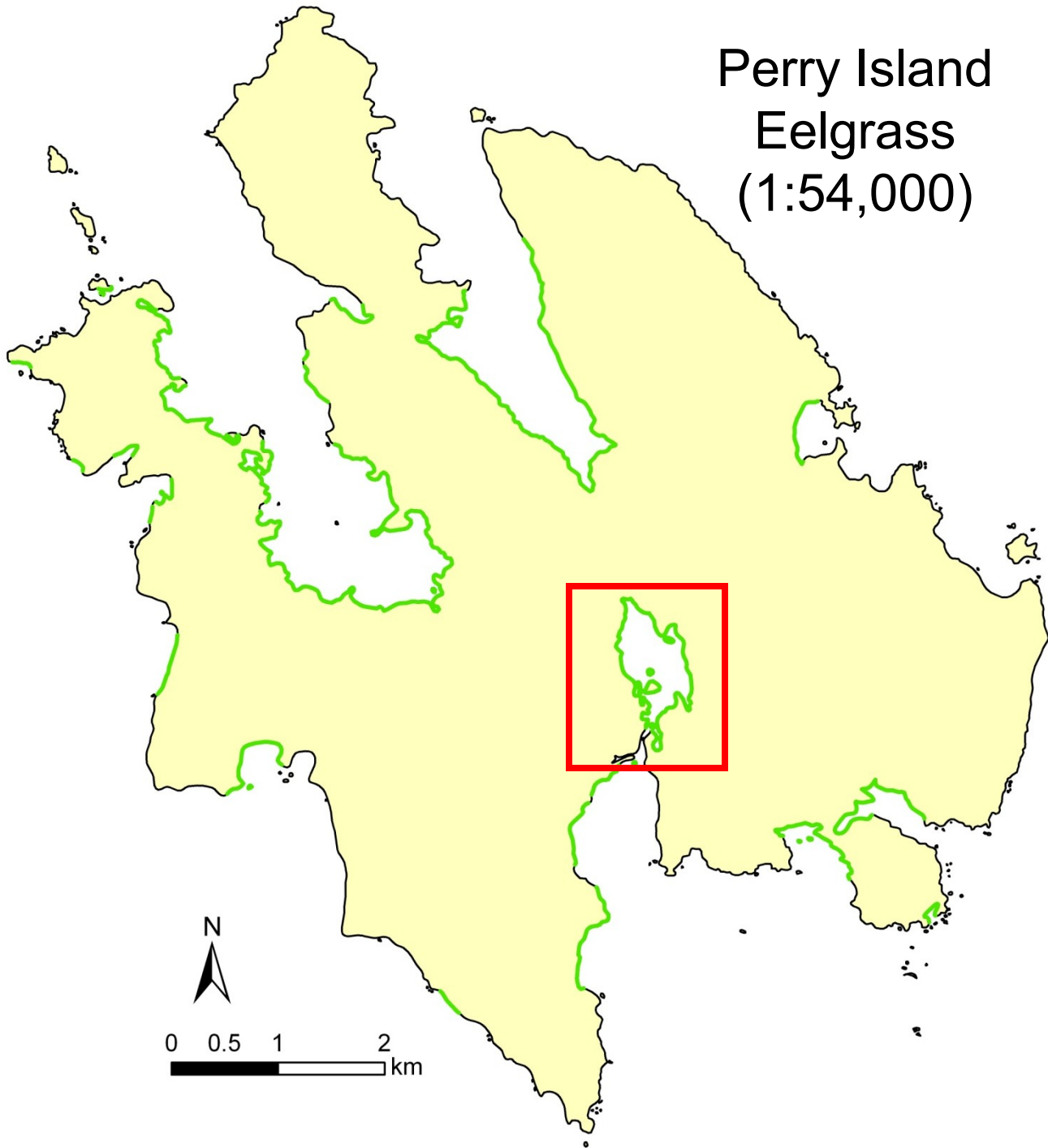


ShoreZone: A Rigorous Geospatial Database

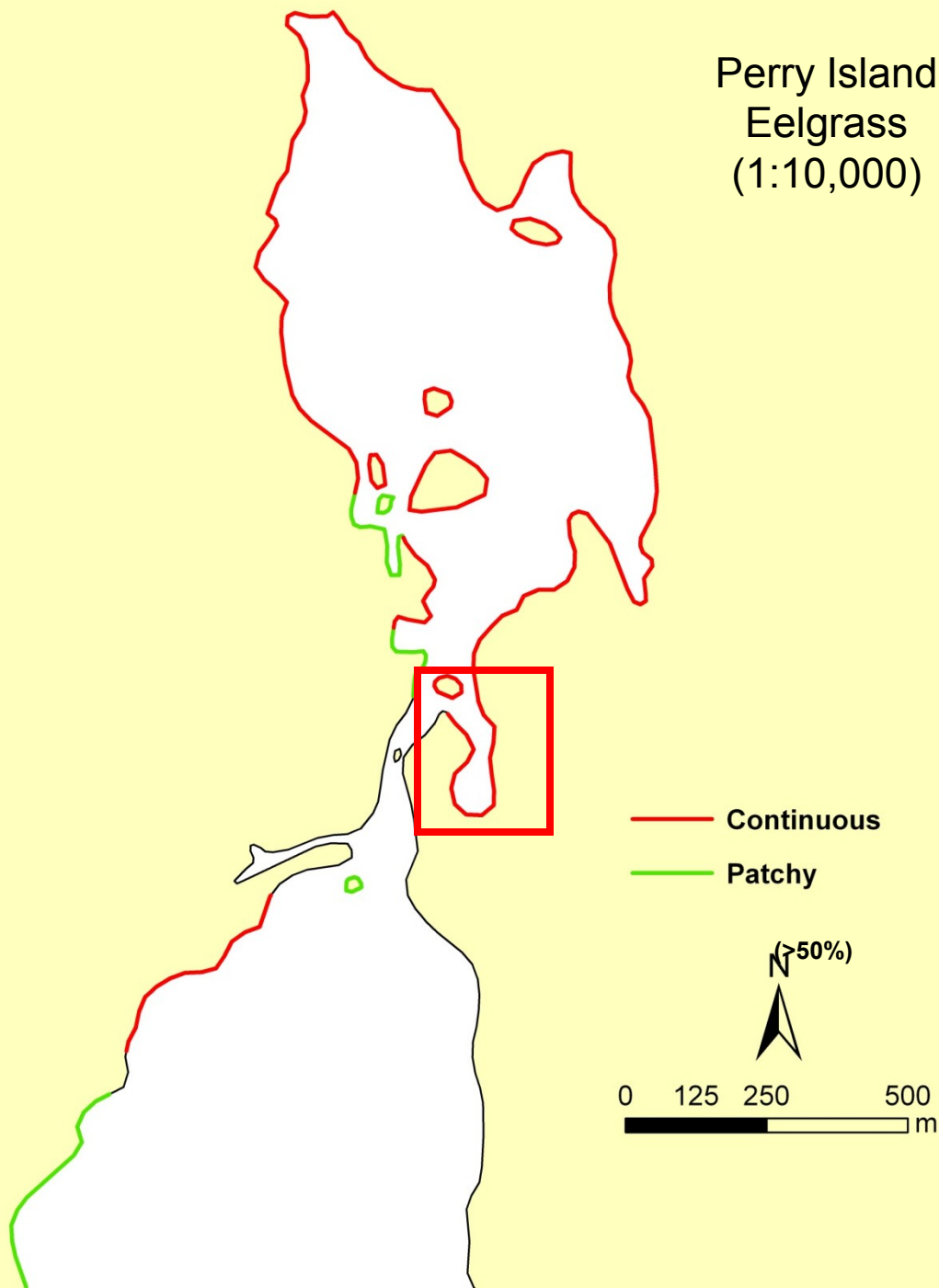




Perry Island Eelgrass (1:54,000)



Perry Island
Eelgrass
(1:10,000)





ShoreZone Applications:

A Spatial Framework for Coastal Habitat Management

Habitat Suitability



Development Siting



Essential Fish Habitat



Planning and Response



Summary of ShoreZone Overview

- based on low-tide imagery
- a *digital, georeferenced, searchable* dataset of geomorphic and biological attributes.
- imagery is web-posted, along with summary data tables and maps



ShoreZone NOAA website at:

www.alaskafisheries.noaa.gov/habitat/shorezone/szintro.htm

- **the NOAA ShoreZone website & database distribution:**

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- **ShoreZone.org**

